

ALTERNATIVE MILITARY PAY RAISES FOR
FISCAL YEARS 1983-1987:
THEIR EFFECTS ON ENLISTED RECRUITING,
RETENTION, AND PERSONNEL COSTS

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PREFACE

The size and distribution of the annual military pay raise has important effects on the defense budget and on the ability of the military services to recruit and subsequently to retain personnel. This year the Congress has debated a wide variety of pay raise policies to take effect in October 1982. This report, prepared at the request of the Subcommittee on Manpower and Personnel of the Senate Committee on Armed Services and the Subcommittee on Defense of the House Committee on Appropriations, analyzes the effects of alternative pay raises for fiscal years 1983 through 1987. In accordance with CBO's mandate to provide objective analysis, the report contains no recommendations.

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SUMMARY

The Congress is now considering the size of the annual military pay raise scheduled to take effect on October 1, 1982; it may also set goals for pay raises beyond 1982. This report analyzes the effects of alternative pay raises on costs, retention of career personnel, and recruiting. Since at present there are no major problems in retaining or recruiting officers, the report focuses on enlisted personnel.

Many factors other than pay raises affect costs, retention, and recruiting. General economic factors play an important role. The results presented in this report are based on the assumption that unemployment will decline over the next five years. (There is, however, considerable uncertainty in any economic projection, particularly as to the future course of interest rates and thus the pace of economic recovery.) The analysis also assumes Congressional approval of service plans for a somewhat larger military, calling for increases by 1987 of about 150,000 enlisted personnel over 1982 levels, a rise of about 8 percent. Other personnel policies--such as the required number of female recruits and required proportion of recruits with previous military service--are assumed to remain similar to today's policies.

One such policy deserves special mention. The Army has indicated that in 1982 and 1983 it is limiting the size of its career force by raising standards for reenlistment. The paper assumes that the Army will continue to limit its career force over the next five years to about 44 percent of the total enlisted force, which is close to today's percentage. This limit has important implications for future years since it requires a larger number of recruits than would be the case if reenlistments were higher. A decision to raise reenlistment standards in the Army should thus be weighed in terms of the recruiting policies that will be required to support it. The Marine Corps may also limit the size of its career force, but no such limits are assumed for the other two services.

POSSIBLE PROBLEMS UNDER "4-4-4" POLICY

Under the First Concurrent Resolution on the Budget for Fiscal Year 1983, all military personnel would receive pay raises of 4 percent a year in 1983 through 1985. The Congressional Budget Office (CBO) analyzed this policy assuming annual raises comparable to civilian pay raises beyond 1985 (often called "comparability raises").

The "4-4-4" policy is, of course, not binding on the Congress, particularly in the years beyond 1983. But it would hold down pay raises and hence personnel costs; for comparison, CBO estimates that comparability pay raises would be 8.0 percent in 1983, 7.5 percent in 1984, and 7.0 percent in 1985. Because it would hold down costs, the 4-4-4 policy may be a point of departure for discussion of the military pay raise in future years.

Career personnel in all the services—those with more than four years' service—could be expected to increase under the 4-4-4 policy, but only at modest rates. This pay policy might not provide enough career personnel to meet all the services' goals. In the Navy, for example, CBO's estimates show that the 1987 career force would fall below the service objective by at least 10,000 persons, or 4 percent. Specific estimates by skill group were not made for this report, but it seems likely that larger percentage shortfalls would occur in some critical skills.

Under the 4-4-4 approach, many fewer high-quality recruits would enter the military than under a policy of comparability raises. The percentage of male recruits who are high school graduates would fall off in all the services. Completion of high school is an important indicator of recruit quality, since graduates are much more likely to complete their initial enlistment than nongraduates. The Summary Table shows recruiting results only for the Army, which faces the most severe recruiting challenge. By 1987, only about 62 percent of the Army's male recruits would hold high school diplomas—as against the current law requiring that in 1983 at least 65 percent of them have high school diplomas. This law is likely to be extended beyond 1983. The projection assumes that the Army raises reenlistment standards and limits the numbers of career personnel, thus increasing the need for recruits. But even without this assumption the Army would still fall below the 65 percent standard.

ALTERNATIVE POLICIES

Because the 4-4-4 policy may lead to difficulties in recruiting and retention, CBO was asked to analyze the effects of four other pay raise options that illustrate potential alternatives. The four are:

- o A comparability pay raise of 8 percent in 1983 and continued comparability raises in 1984 to 1987.
- o An across-the-board pay raise of 4 percent in 1983 and comparability raises in 1984 to 1987. This has been the Administration's recommended policy during the recent budget debates.

SUMMARY TABLE. SELECTED ESTIMATES OF COSTS, RECRUITING AND RETENTION

Pay Raise	Cost Increases Relative to 4-4-4 Policy (billions of dollars) ^a		Recruiting (percentage of Army male NPS recruits holding high school diplomas) ^b		Retention (thousands of DoD enlisted personnel with more than four years' service) ^c	
	1983	1983-1987 Total	1983	1987	1983	1987
Assuming Comparability Raises Beyond 1985						
4 Percent in 1983-1985	0	0	76	62	829	907
Assuming Comparability Raises Beyond 1983						
8 Percent in 1983	1.5	19.2	77	67	839	996
4 Percent in 1983	0	10.2	76	65	829	957
Targeted Raise, 1983	0.1	10.8	75	65	834	969
Educational Benefits for Recruits in Lieu of 1983-1985 Raises	0.4 ^d	11.4 ^d	77	62	829	957

^aRepresents DoD active and reserve pay and allowances for enlisted and officer personnel.^bMinimum goal is 65 percent.^cFigures indicate maximum career force size possible. Goal is 817,000 in 1983; goals beyond 1983 are generally not available.^dThis option includes the accrual costs of liabilities for educational benefits that would be paid in the future. Present educational benefits would be cancelled under this option, resulting in a 1983 reduction of \$140 million in liabilities for future benefits. These liabilities do not now appear in the DoD budget, however, and so are not included in this table.

- o Pay raises for 1983 targeted toward the career enlisted force. Under this policy, the two lowest enlisted grades (E1/E2) would receive no pay increase, while the top five grades (E5 to E9) would receive a 6 percent increase. Enlisted grades E3 and E4 and all officers would receive a 4 percent raise. Beyond 1983, pay raises would return to comparability levels and be given to all personnel. This policy would continue the approach adopted last year of a targeted pay raise designed to strengthen career force retention.
- o A 4 percent pay raise in 1983 and comparability pay raises in 1984 to 1987 for all personnel except recruits in their first year of service. Pay for recruits in their first year would be frozen at 1982 levels from 1983 to 1985 in order to finance improved educational benefits. This alternative responds to those who favor educational incentives as a means of increasing recruit quality, but are concerned about the overall cost of such a program.

There are, of course, other approaches to meeting recruiting and retention goals. The Congress could, for example, limit overall pay raises while increasing bonuses or other special pays for groups the services cannot recruit or retain in adequate numbers. The Congress could also mandate changes in personnel policies other than pay. While these approaches have promise as ways to hold down costs, they are beyond the scope of this report.

Each of the pay raise alternatives examined in this report should allow the services to meet their 1983 objectives for career retention and the minimum recruit quality standards set by the Congress. Beyond 1983, each of the options to the 4-4-4 policy also should allow a reasonable chance for successful retention and recruiting. The options vary, however, in the degree to which they would achieve these purposes, as well as in their costs and associated risks. Their estimated costs and retention effects are shown in the Summary Table.

Comparability Pay Raises

The policy of giving comparability raises (including an 8 percent across-the-board raise in 1983) would be the most favorable to retention and recruiting. All services would be able to expand their career forces rapidly between 1983 and 1987, meeting overall enlisted career personnel goals and most of the goals for technical skills where retention of trained personnel is difficult. In addition, all of the services would be able to maintain high levels of recruit quality, and the Army would exceed its 65 percent standard for high school graduates in each of the next five

years. This alternative is the most expensive, however. Compared with the 4-4-4 pay raise policy, it would add \$1.5 billion to military personnel costs in 1983 and \$19.2 billion over five years.

4 Percent Raise in 1983

A 4 percent raise in 1983, followed by comparability raises thereafter, would result in better retention and recruiting than the 4-4-4 policy, though not as good as under a comparability pay raise policy. Each service could meet its career force objectives in 1983 and increase the size of its career force beyond 1983. The Army would exceed its recruit quality standard through 1986, but just meet the standard in 1987. The 4 percent raise in 1983 would leave budget authority and outlays at the level assumed in the first budget resolution. But since comparability raises would be paid in 1984 through 1987, this alternative would raise the five-year costs by \$10.2 billion over those of the 4-4-4 policy.

Targeted Pay Raise

If a 4 percent pay raise in 1983 was targeted toward senior enlisted personnel, followed by comparability raises in later years, career retention would improve, which in turn would lower the demand for recruits. But the supply of hard-to-recruit male high school graduates would decline. These two effects would result in a larger career force and about the same recruiting results as the across-the-board 4 percent pay raise alternative. The added costs of this alternative would be slightly greater than those of the 4 percent raise—\$100 million in 1983 and \$10.8 billion over five years.

Educational Benefits in Lieu of Recruit Pay Raise

Substituting educational benefits for recruit pay raises in 1983 to 1985 would leave the number of career personnel unchanged relative to the 4 percent in 1983 alternative. The increased educational benefits for recruits would allow the Army to raise somewhat its percentage of high school graduate enlistees in 1983. In later years, however, the benefits would only partially compensate for the loss in pay raises available under the other alternatives. Thus by 1987 the Army would not meet its 65 percent target because, relative to the other alternatives, initial recruit pay would have fallen by over 10 percent in real terms. Moreover, relative to the 4-4-4 policy, the educational benefits alternative would add \$450 million in 1983 costs and \$11.4 billion in total five-year costs. This would occur because the "accrual costs" of educational benefits—that is, money set aside for benefits to be paid in the future—would exceed the savings from a zero pay raise for recruits in 1983 to 1985.

Advocates of this alternative expect special advantages from improving educational benefits in lieu of a recruit pay raise. The approach would move toward the pay system in effect before the All-Volunteer Force, featuring low pay for junior personnel coupled with substantial educational benefits. Such a package might attract more college-bound youths into the services.

On the other hand, data on career plans of those who say they are college-bound suggest that few would change their minds and postpone their education until after military service. Moreover, it would be an expensive way of countering the recruiting effects of no pay raise, since the benefits would have to be substantial to offset the reluctance of youthful recruits to wait several years before receiving them. Finally, the costs and effects of this combination option are less certain than those for other pay options, since individual reactions to improved educational benefits are not easily forecast.

CONCLUSION

In 1983 each of the pay options discussed in this report would allow the services to meet or exceed their goals for retention as well as the minimum goals for recruit quality set by the Congress. For those options that limit pay raises below comparability, costs would be equal or close to those assumed for 1983 in the first budget resolution. The option providing educational benefits in lieu of recruit pay raises stands out as the most far-reaching but also the most uncertain in its effects.

Successful retention and recruiting beyond 1983 will depend heavily on future pay raise decisions. Coupled with comparability increases beyond 1983, any of the options discussed in the report should provide a reasonable chance of successful retention and recruiting. Continued limits on pay raises beyond 1983—such as the 4-4-4 policy assumed in the first budget resolution—could lead to problems. Specifically, the Army would not meet its minimum recruiting goals, and the Navy would be unable to reach its career force target for 1987. Indeed, over the longer run the Congress can ensure the viability of the All-Volunteer Force only if it maintains overall military compensation at levels that are competitive with private-sector pay.

CHAPTER I. INTRODUCTION

Over the past several years, the Congress has expressed concern as to the ability of the military services to attract and retain adequate numbers of qualified personnel, especially for the enlisted forces. This was prompted largely by the declining quality of Army recruits (as measured by education and aptitude levels) and by persistent shortfalls of some groups of experienced personnel, especially Navy petty officers. In both instances, these difficulties became more pronounced during the late 1970s—a period when the level of military pay was declining relative to civilian pay and when the job market offered more alternatives than it does today. Realizing that a continuation of the trend would threaten the survival of the All-Volunteer Force, the Congress has raised military pay and allowances by almost 30 percent over the last two years (as compared to an average pay increase of 14 percent among nonfarm production workers in the private sector). The Congress intended these raises to bring military and civilian pay into better balance.

The improvements in military pay occurred during a period of rising civilian unemployment. Between October 1980 and December 1981, the unemployment rate for all workers rose from 7.5 percent to 8.9 percent, and for males aged 16 to 19 from 16.2 percent to 20.2 percent.

Together, the higher levels of military pay and other benefits, and the deteriorating civilian labor market, have dramatically improved the services' ability to attract recruits and to build their enlisted career forces. For example, in the Army—which faces the most difficult recruiting challenge—the proportion of male recruits holding high school diplomas rose from 49 percent in fiscal year 1980 to 78 percent in fiscal year 1981, and could reach 85 percent this year. In the Navy, which has had the most difficulty in retaining career personnel, reenlistment rates among such personnel climbed from 67 percent in fiscal year 1980 to 73 percent in 1981, and could reach 76 percent this year. Both the Marine Corps and the Air Force have also experienced significant improvements.

CURRENT ISSUES

Against this backdrop of improved enlisted force recruiting and retention, the Congress is now considering the size of the annual pay raise

to take effect in October 1982. It may also decide to set goals for pay raises beyond 1982. Indeed, the First Concurrent Resolution on the Budget for Fiscal Year 1983 assumed that military pay raises would be limited to 4 percent a year in fiscal years 1983 to 1985. By comparison, CBO estimates that raises for nonfarm production workers in the private sector will average about 8 percent in 1983, 7.5 percent in 1984, and 7.0 percent in 1985. While the Congress is not committed to a 4-4-4 policy, this may be a useful point of departure in examining alternatives for the annual military pay raise.

In addition to determining the overall size of the pay raise, the Congress may choose to target the raise toward senior personnel, as was done in October 1981. This would reflect a belief that present monetary incentives in the career military service are too small to compensate for the added responsibility. Moreover, both the Navy and the Air Force have expressed their intent to increase the size of their career forces, and a targeted pay raise would facilitate this growth.

A final issue for the Congress is whether to include more educational benefits in the compensation offered to recruits. Some favor replacing the current program of educational benefits with a more generous one, and possibly financing this by restricting pay raises for recruits. H.R. 1400, the bill passed by the House Committees on Armed Services and Veterans' Affairs, provides educational benefits up to a maximum of \$21,600 for those who complete 36 months of service in shortage skills. The Congress may wish to consider such generous educational benefits for recruits as a means of drawing more college-bound youth into the military. Benefit levels of this size would represent a significant increase in compensation for recruits not eligible for the Army College Fund (VEAP with supplemental "kicker" payments) but who plan to attend college.

PAY RAISE ALTERNATIVES

This report, prepared at the request of the Subcommittee on Manpower and Personnel of the Senate Committee on Armed Services and the Subcommittee on Defense of the House Committee on Appropriations, analyzes the effects on enlisted recruitment and retention, as well as on budgetary outlays, of several alternatives to the 4-4-4 compensation policy. Since CBO's analysis suggests that this 4-4-4 policy might make it difficult to attract and retain sufficient personnel, the report considers four other alternatives that were suggested by the Subcommittees. Table 1 specifies the exact pay raises assumed under the 4-4-4 plan and the four alternatives. None of them assumes subsequent "catch-up" pay raises to

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TABLE 1. SUMMARY DESCRIPTION OF ALTERNATIVE PAY RAISE PLANS

Plan	Description	Percent Increases			
		Grade	1983	1984	1985 1986 1987
"4-4-4" Raises	Adopts First Resolution and caps pay raises at 4 percent 1983 to 1985. Plan assumes comparability raises thereafter	All			
		Grades	4.0	4.0	4.0 6.7 6.6
Full Comparability	Provides raises (1983-1987) matching those in the private sector	All			
		Grades	8.0	7.5	7.0 6.7 6.6
4 Percent and Full Comparability	Caps raise at 4 percent in 1983, but continues with full comparability raises beyond 1983	All			
		Grades	4.0	7.5	7.0 6.7 6.6
Targeted Raises	Targets money available for 1983 raise under First Resolution (equivalent to about 4 percent raise) toward the career force, with comparability raises thereafter	E1-E2	0.0	7.5	7.0 6.6 6.6
		E3-E4 Officers	4.0	7.5	7.0 6.7 6.6
		E5-E9	6.0	7.5	7.0 6.7 6.6
Educational Benefit and Recruit Pay Freeze ^a	Freezes pay for recruits in their first year of service at 1982 levels for 1983-1985 and substitutes certain educational benefit provisions under H.R. 1400. In 1983, all others receive 4 percent raise, with full comparability thereafter	E1-E2	0.0	0.0	0.0 6.7 6.6
		E3-E9 Officers	4.0	7.5	7.0 6.7 6.6

^aSpecifically, this alternative would provide: (1) a \$200 per month educational benefit for all persons. One month of benefits would be earned for each month of service, to a maximum of 36 months; (2) up to \$400 per month in special payments for high-quality enlistees who serve in critical skills (which this report assumes are mostly in the Army); and (3) a "cash-out" option equal to 25 percent of the maximum earned benefits. Cash-out is payable to anyone who reenlists after completion of a first enlistment and forfeits all rights to educational benefits.

compensate for limits on pay raises in 1983. Thus, the term "comparability" is limited to the size of the annual pay raise and does not mean comparability with pay received by those doing similar work in the private sector. For enlisted personnel, comparability raises are assumed to be those received by nonfarm production workers in the private sector.

This study does not exhaust all the possible approaches to setting military pay so as to meet the recruiting and retention needs of the All-Volunteer Force. As a general rule, recruiting goals could be met less expensively if compensation beyond that necessary to keep pace with entry-level private-sector pay were provided through enlistment bonuses paid in skill areas for which it is difficult to attract recruits. Similarly, reenlistment bonuses could be used to help retain needed career personnel. Thus, more extensive use of enlistment and reenlistment bonuses could be used to mitigate the adverse effects of a policy limiting pay raises below comparability (such as the 4-4-4 policy).¹

A more comprehensive approach toward compensation reform might include restructuring the military retirement system to provide more incentive to remain past the first term of service, or to continue beyond today's 20-year eligibility point. One approach would provide deferred annuities at age 60 for members who serve at least 10 years on active duty. If combined with some modest reductions in retirement pay for those who complete 20 years, it could provide a career force equal in size to the present force at less cost in the longer run. But such a restructuring would require careful study. One limitation is that it would not reduce outlays in the near term since members currently on active duty would need to be "grandfathered" under current retirement rules.²

¹For a more complete discussion of this approach, see Congressional Budget Office, *Resources for Defense: A Review of Key Issues for Fiscal Years 1982-1986* (January 1981), pp. 84-8.

²For an example of this approach, see Congressional Budget Office, *Costs of Manning the Active-Duty Military*, Staff Working Paper (May 1980), pp. 27-31.

CHAPTER II. EFFECTS ON RETENTION AND RECRUITING

This chapter analyzes the effects of alternative pay raises on retention and recruiting of enlisted personnel only. (There do not appear to be any significant problems in recruiting and retaining officers in the near future.) The chapter begins with a discussion of factors other than pay that should be taken into account, such as military personnel policies and economic conditions.

FACTORS OTHER THAN PAY RAISES

The size of the enlisted force will have a significant effect on recruiting and retention. This report assumes that the Defense Department's current five-year program will be carried out, and that the following enlisted force levels will be achieved (in thousands):

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Army	673.6	673.0	686.0	694.0	705.0
Navy	488.0	517.8	529.8	535.6	537.0
Air Force	484.4	499.1	514.7	521.4	526.2
Marine Corps	175.5	177.2	180.1	182.0	183.3
	<u>1,821.5</u>	<u>1,867.1</u>	<u>1,910.6</u>	<u>1,933.0</u>	<u>1,951.5</u>

The Army plans to increase its enlisted force beginning in 1985, in response to requirements for the Rapid Deployment Force. The Navy's growth is a direct result of its plans to expand the size of its active fleet to 15 carrier battle groups by the end of this decade. The Air Force's growth is designed to reduce shortages in maintenance and training units as well as to support new weapons systems. Finally, the Marine Corps plans to add new units to support the Rapid Deployment Force.

Military personnel policies other than total force size also play an important part in recruiting and retention. This report assumes that all bonuses for enlistment or reenlistment, and other special pays, remain constant in real terms at 1981 levels. Except as noted, specific policies governing recruiting and retention—such as the number of female recruits, number of recruits with previous military service, and standards for reenlistment—are all assumed to remain roughly as they are now.

Economic factors also play a key role. This report bases its projections of enlisted manpower supply on CBO's most recent economic forecast for the five-year period. Unemployment is projected to decline gradually from its current level of 9.8 percent to 8.8 percent in 1983, 7.8 percent by 1985, and an average of 7.25 percent beyond 1985. Comparable changes are assumed in youth unemployment rates, which most directly affect enlisted recruiting. The report also assumes that average pay increases for production workers (nonfarm) in the civilian sector decline from about 8 percent in 1983 to 6.6 percent in 1987, reflecting a fall in the projected rate of inflation.

There is, however, considerable uncertainty in this economic forecast—notably as to the future course of interest rates, and of monetary policy in general. A more rapid recovery would mean that the projections of retention and recruiting discussed below are overly optimistic. Conversely, a sluggish recovery would mean that they are on the pessimistic side.

CAREER RETENTION

In 1983, the services' goal for career personnel is 817,000, or about 45 percent of the total enlisted force. (Career personnel are defined here as those with more than four years' service.) The desired percentages vary by service, from 30 percent in the Marine Corps to 44 percent in the Army and Navy and 50 percent in the Air Force (Table 2). Today the services' ability to retain career personnel is very good. But as recently as 1980 there was a worrisome exodus of career personnel, suggesting the need to examine the effects of alternative pay programs on career retention.

Table 3 shows CBO's estimates of the enlisted career force associated with the 4-4-4 policy and the other pay raise alternatives.¹ These

¹These estimates are based on recent career retention experience in each service. For each pay raise alternative, past reenlistment rates were adjusted using CBO estimates of pay elasticity to reflect the size of the specific pay raise. (Estimates of pay elasticity—the percentage change in reenlistment rates for a given percentage change in pay—are presented in Congressional Budget Office, *Costs of Manning the Active-Duty Military*, Staff Working Paper (May 1980), p. 41.) To take account of the expected improvement in economic conditions, two different sets of historical data were used. For fiscal year 1983, the projections are based on reenlistment behavior during 1981—a year when civilian unemployment averaged 7.6 percent. Beyond 1983, the projections are based on the lower rates that prevailed in 1979—a year when civilian unemployment averaged only 5.8

estimates represent the maximum potential size of the career force assuming that the reenlistment standards in effect before 1982 remain in effect, and that no constraints are placed on career reenlistments. Table 2 shows the career-force objectives for 1983. (Unfortunately, only the Navy has formally supplied the Congress with an estimate of its desired career force in the years beyond 1983.)

By comparing the requirement in Table 2 with CBO's projected supply shown in Table 3, one can see that in 1983, each service should exceed its career force objective under any of the alternative pay plans. In the years beyond 1983, under all pay raise options, the services will be able to increase the size of their career forces over current levels, assuming that they maintain reenlistment standards in effect before 1982. The 4-4-4 policy would promise the least growth; moreover, it would not meet Navy's long-term requirements and perhaps not all of the needs of the other services.

TABLE 2. CAREER-FORCE OBJECTIVES IN FISCAL YEAR 1983

Service	Number (in thousands)	Percent of Total Enlisted Force
Army	296	44
Navy	222	44
Marine Corps	52	30
Air Force	247	50
Total	817	

NOTE: Objectives for 1983 as presented in *Fiscal Year 1983 Report of Secretary of Defense*, p. III-64. Navy objectives for fiscal years 1984-1987 are presented in *Manpower Requirements Report for Fiscal Year 1983*. Expressed as the number of personnel with over four years of service, these Navy objectives are (in thousands): 1984, 238; 1985, 249; 1986, 257; 1987, 263.

Footnote Continued

percent. Thus, the estimates of career force size reflect an improvement in economic conditions similar to that assumed in the CBO economic projections.

**TABLE 3. ESTIMATED NUMBERS OF ENLISTED CAREER PERSONNEL
WITH MORE THAN FOUR YEARS OF SERVICE UNDER
ALTERNATIVE PAY POLICIES (By fiscal year, in thousands)**

Pay Raise Plan	1983	1984	1985	1986	1987
I. 4-4-4 Pay Raises in 1983-1985 and Comparability Thereafter					
Army	296	307	308	310	309
Navy	222	236	244	249	253
Marine Corps	58	61	62	62	62
Air Force	254	262	272	279	283
Total	830	866	886	900	907
(with constraints)	(830)	(855)	(875)	(891)	(903)
II. 8 Percent in 1983 and Comparability Thereafter					
Army	299	319	329	341	347
Navy	224	242	255	266	274
Marine Corps	59	65	68	71	73
Air Force	257	268	283	294	302
Total	839	894	935	972	996
(with constraints)	(834)	(866)	(897)	(923)	(943)
III. 4 Percent in 1983 and Comparability Thereafter					
Army	296	310	316	325	330
Navy	222	238	249	258	265
Marine Corps	58	62	64	67	68
Air Force	254	264	277	286	294
Total	830	874	906	936	957
(with constraints)	(830)	(859)	(885)	(907)	(926)
IV. Targeted Raise in 1983 and Comparability Thereafter					
Army	297	313	321	330	336
Navy	223	239	251	261	268
Marine Corps	59	63	66	68	70
Air Force	255	264	278	288	295
Total	834	879	916	947	969
(with constraints)	(831)	(860)	(888)	(912)	(930)
V. Educational Benefit for Recruits Instead of Raise in First Three Years					
Army	296	310	316	325	330
Navy	222	238	249	258	265
Marine Corps	58	62	64	67	68
Air Force	254	264	277	286	294
Total	830	874	906	936	957
(with constraints)	(830)	(859)	(885)	(907)	(926)

NOTE: Figures in parentheses indicate career force size assuming the Army and Marine Corps place limits on the number of career personnel as presently planned. CBO assumed the following pattern of career force constraints (in thousands). Army: 1983, 296; 1984, 297; 1985, 299; 1986, 303; 1987, 307. Marine Corps: 1983, 58; 1984-1987, 60.

4-4-4 Policy

As noted above, all the services could meet their 1983 career-force objectives under the 4-4-4 policy. Indeed, all the services together could have as many as 830,000 career personnel; their objective is 817,000. Beyond 1983, however, the 4-4-4 policy would result in the smallest increase in career forces of all the pay options. For all the services together, the 4-4-4 policy would result in an increase of 77,000 career personnel between fiscal year 1983 and fiscal year 1987. At that time, the total career force would number almost 910,000 or 46 percent of the total enlisted force.

The low rate of growth under this option would not meet the Navy's requirements. The Navy's plans call for a rapid increase in the number of petty officers in grades E4 to E9. To realize this increase by 1987, the Navy will need to increase its percentage of personnel with over four years of service to 49 percent from today's level of 44 percent. Under the 4-4-4 policy, CBO estimates show the Navy falling short of its 1987 objective by 10,000 career personnel, or about 4 percent of the requirement.

Although the Air Force has not formally presented its career force goals beyond 1983, it is probable that some substantial increase above the current 50 percent target will be sought. Under the 4-4-4 option, it would reach 54 percent by 1987. While this might meet aggregate requirements, the Air Force could have difficulties filling some technical skills.

The Army and the Marine Corps have both indicated informally that they plan to limit the growth of their career forces. The Army has indicated that it will raise reenlistment standards in an effort to improve the quality of career personnel and to limit its size to around 300,000—a figure only slightly larger than today's career force. The Marine Corps, in seeking to maintain a high proportion of youthful troops for combat, plans to limit its career force to no more than 60,000. (The notes to Table 3 indicate the specific limits that were assumed for both services.) Under the 4-4-4 option, the Army and Marine Corps should be able to meet their desired career force levels. But the Army would be constrained to around 310,000 career personnel by 1987 and thus would be limited in its ability to raise the quality of career personnel by tightening reenlistment standards.

Other Options

As noted earlier, each service should meet its numerical objectives for career retention in 1983 under any of the options depicted in this paper, including the 4-4-4 policy.

Unlike the 4-4-4 policy, however, the alternative options include larger pay raises beyond 1983, resulting in the potential for a larger projected career force. The Navy should be able to meet its objectives. By 1987, for example, it would have the potential to retain from 265,000 to 274,000 career personnel under the alternative options—well above its objective of 263,000 career personnel. The other services should also be able to increase the number of career personnel under these options.

While all the alternatives offer a reasonable chance of successful retention, they vary in their effectiveness. The differences could become critical in enabling the services to meet retention needs in specific skills that are hard to fill.

The career force could grow most rapidly under the policy of full comparability, providing an 8 percent raise in 1983 and comparability raises thereafter. Under this policy, the services could add over 150,000 career personnel by the end of fiscal year 1987, assuming no limits on career growth. It would result in almost one million career personnel by the end of 1987, or 51 percent of the total enlisted force. The full comparability policy would provide the most experienced military force and offer the best chance of filling technical skills where high retention may be difficult to maintain as economic conditions improve.

A targeted raise, featuring 6 percent for senior career personnel in 1983 and comparability raises thereafter, would result in somewhat slower growth than a policy of full comparability, but would still allow the career force to grow by 135,000 between 1983 and 1987.

A 4 percent across-the-board pay raise in 1983 and comparability raises thereafter would result in a career force of 957,000—about 49 percent of the total enlisted force in 1987.

For the option providing educational benefits coupled with a 4 percent raise in 1983 for all personnel except new recruits, this report assumes the same growth in the career force as would result from a 4 percent across-the-board raise in 1983. This is because the educational benefits alternative includes a "cash-out" provision that allows personnel to exchange earned benefits for cash provided they remain on active duty. This provision would serve to offset the incentive to leave the military in order to use the educational benefits, and thus maintain career retention rates at levels comparable to today's.

In sum, each service should be able to meet its 1983 objective for retention under the 4-4-4 policy and any of the other pay raise alternatives. Beyond 1983, the services could increase the size of their career forces if they desired. The rates of growth would be smallest under the

4-4-4 policy, which might not enable the services to meet all their requirements. In particular, the Navy would not be able to realize its goal of 49 percent career personnel by 1987.

RECRUITING

To achieve their authorized enlisted force size, the services will need to attract about 360,000 recruits in 1983. These recruits must meet service goals for recruit quality—goals that are generally not supplied to the Congress—in addition to minimum quality standards set by law. The 1982 law, which is likely to be extended, requires that at least 65 percent of the Army's male recruits with no previous military service must hold high school diplomas. Educational level is an important indicator of the quality of military recruits because high school graduates are more likely than nongraduates to adjust successfully to military life. (Among graduates, the rate of attrition, or failure to complete the first term of enlistment, is roughly one-half that for nongraduates.) The law also requires that no more than 20 percent of any service's recruits with no previous military service can score in the lowest acceptable test-score category (Category IV) on an entrance examination given all recruits. Table 4 shows CBO estimates of recruiting success in terms of these legal requirements.²

These recruiting results are affected in two ways by pay raises. First, the supply of the hard-to-recruit group—male high school graduates with no previous military service who place in the upper test-score categories—is directly affected by the level of military pay, since these persons usually have attractive civilian job opportunities or plan to attend college. Second, pay affects the size of the career force and hence the

²CBO's estimates of recruit quality are based on projections of the number of male high school graduates in mental categories I to III with no previous military service who would be willing to enlist in each service. This group is the "supply-limited" group of recruits. Supply elasticities from previous research were used to project the number of high-quality recruits for the alternative pay options, the number of recruiters, the size of the youth population, and level of the youth unemployment. These projections were translated into total male high school graduate supply by assuming that the number of mental category IV high school graduates equals between 5 and 20 percent of all recruits. Finally, the percentage of male recruits with high school diplomas was calculated by dividing the estimated supply by the total demand for male recruits in each projection year. This methodology will be documented in a forthcoming CBO paper.

TABLE 4. ESTIMATED PERCENTAGES OF MALE RECRUITS WITHOUT PREVIOUS SERVICE ENLISTING WITH A HIGH SCHOOL DIPLOMA (By fiscal year)

Pay Raise Plan		1983	1984	1985	1986	1987
I.	4-4-4 in 1983-1985 and Comparability Thereafter					
	Army	76	70	66	62	62
	Navy	86	64	69	72	75
	Marine Corps	83	69	67	66	65
	Air Force	99	86	79	87	87
II.	8 Percent in 1983 and Comparability Thereafter					
	Army	77	75	72	70	67
	Navy	92	69	77	82	86
	Marine Corps	87	70	69	68	68
	Air Force	99	95	90	99	99
III.	4 Percent in 1983 and Comparability Thereafter					
	Army	76	72	70	66	65
	Navy	86	66	73	76	80
	Marine Corps	83	70	68	68	67
	Air Force	99	88	84	92	93
IV.	Target Raise in 1983 and Comparability Thereafter					
	Army	75	72	70	65	65
	Navy	86	65	72	76	79
	Marine Corps	83	70	68	68	67
	Air Force	99	88	83	92	92
V.	Educational Benefit for Recruits Instead of Raise in First Three Years					
	Army	77	72	69	63	62
	Navy	86	65	71	73	75
	Marine Corps	83	70	68	66	65
	Air Force	99	87	81	88	86

SOURCE: Based on CBO's forecasted supply of male recruits who have high school diplomas and who score in the top three categories on the military's entrance examination--the so-called "high-quality" recruits. To make these projections, CBO used the projected career force size shown in Table 3 for the Navy and the Air Force. Both the Army and the Marine Corps plan to limit the size of their career forces. CBO's analysis of recruiting assumed the following numbers of career personnel (in thousands). Army: 1983, 296; 1984, 297; 1985, 299; 1986, 303; 1987, 307. Marine Corps: 1983, 58; 1984 to 1987, 60.

number of recruits that are needed. Table 4 suggests that in 1983 all the services should enjoy reasonable recruiting success. Except for the 4-4-4 policy, the pay options should also provide a reasonable chance of recruiting success in the years beyond 1983. Under the 4-4-4 policy, however, the Army could fall below the minimum recruiting standards set by the Congress in the years beyond 1983, and the other services' recruiting success would also decline sharply.

Recruiting results are also affected by the level of unemployment among youth. CBO assumes that the youth unemployment rate will decline from about 23 percent in 1982 to 18.6 percent in 1987, almost a 20 percent decrease. The number of high-quality recruits (high school graduates who score in the top three categories on the entrance examination) has been found to be only somewhat sensitive to changes in the civilian job market, however—for example, a 20 percent change in the youth unemployment rate will change the number of high-quality recruits by about 6 to 10 percent. This reduction in supply lowers the Army male high school graduate content by only 2 to 3 percentage points.

4-4-4 Policy

Under the 4-4-4 policy, the Army would face the most serious recruiting problems of the four services. The estimates indicate that the minimum 65 percent high-school-graduate standard for males with no previous military service could be met through 1985. After that, the Army would have trouble meeting the minimum standard for recruit quality, since between 1983 and 1985 real pay levels for recruits would have declined by over 10 percent relative to a policy of comparability raises. It could, however, improve its recruiting performance by changing its personnel policies. For example, it could relax its controls on career force size. The estimates in Table 4 assume that the Army limits the size of its career force to around 300,000 (see note to Table 4 for details). Alternatively, if it increased the size of its career force it could reduce the demand for recruits and so increase their quality. But by 1987, even if it did so, it would still fall slightly below the 65 percent minimum set by the Congress.

The Army could also increase the number of female recruits or of recruits with previous military service; neither group is now in short supply. Although these actions would decrease the need for male recruits with no previous service and so improve the percentages in Table 4, they could have unwanted consequences for personnel management. They might breach the present limits on the number of women serving in nontraditional skills, or make promotion slower as the increased numbers of previous-service recruits enter mid-career pay grades.

The 4-4-4 pay policy could also create recruiting problems for the other services. Recruiting performance would decline in all of them. In the Marine Corps and the Navy, the percentages of male high school graduates would be 5 to 10 points below those attained in recent years. While the other services are not presently required by law to meet a minimum percentage standard, they might not meet their own established goals.

Comparability Pay Raises

A policy of full comparability pay raises would yield the most favorable results for recruiting. The Army would meet its minimum standards in each year through 1987. Both the Navy and the Air Force would achieve recruiting results much higher than recent experience. (In the Navy, the high school percentage would be lower in 1984 because of a large increase in recruit needs. In the Air Force, virtually all male recruits would be high school graduates except in 1985, when a large recruiting demand would depress the percentage.) The Marine Corps might fall short of its recent average recruiting percentage--78 percent in 1980-1981--but primarily because its policy of holding down career reenlistments increases the need for new recruits.

4 Percent and Targeted Options

Either the 4 percent across-the-board or the targeted raise in 1983, each followed by comparability raises in 1984 through 1987, would result in slightly lower percentages than the full comparability policy. The Army could still exceed the 65 percent standard in each year through 1985, and just meet the standard in 1986 and 1987. (The most recent pay alternative, reported out of the Senate Committee on Armed Services, would give no pay raise to new recruits in grade E1 and 4 percent to all other grades in 1983. Although not included in this report, this alternative would yield recruiting results that are virtually identical to the targeted pay alternative). Both the Navy and the Air Force could continue to exceed their high school percentages of recent years. The Marine Corps percentages would decline because of the career force limit noted above, falling below 70 percent in 1985 through 1987.

Educational Benefits Alternative

The effect of substituting more generous educational benefits for recruit pay raises is difficult to assess, because not enough is known about the value young people place on deferred benefits. CBO's analysis is based

on the "present value" of educational benefits—that is, their value to the recruit after adjusting for the recruit's preference for income now rather than later.³ This approach treats educational benefits as simply another form of pay—postponed until after completion of the initial service obligation.

Advocates of improving educational benefits in lieu of a recruit pay raise see it as offering several advantages. It would move toward the pay system in effect before the All-Volunteer Force, which featured low pay for junior personnel coupled with substantial educational benefits. Such a package might attract more college-bound youths, for whom—especially in the Army—the value of improved educational benefits would exceed the cut in recruit pay. For some of those, an opportunity to attend college may not be otherwise available.

The estimates in Table 4 suggest that the Army would do slightly better in recruiting in 1983 under the educational benefits alternative than under three of the other alternatives. Only the full comparability (8 percent in 1983) alternative would result in a higher percentage of male high school graduates. The Army would gain from the large supplemental benefits that the educational option provides to those in shortage skills. This report assumes that most such benefits are received by Army personnel, as is the case with current educational programs. But the other services would not suffer any 1983 recruiting decline under this approach.

Beyond 1983, however, the approach could cause problems. The effect of freezing recruit pay through 1985—which was included to hold down costs—would reduce recruiting effectiveness. By 1987, according to the estimates, the Army would not be able to meet its 65 percent standard for male high school graduates. (The Army might be able to offset this by

³The present value of educational benefits—their value at the time of enlistment—was computed using a 20 percent rate of discount. Measured as a percent of the present value of career military pay, the present values of the educational benefits for each service equate to: Army, 7.35 percent; Navy, 2.3 percent; Marine Corps, 2.85 percent; Air Force, 2.85 percent. The differences among the services reflect the use of supplemental or "kicker" payments in the Army and somewhat higher career pay in the Navy. Offsetting adjustments to these values were made to reflect loss of existing benefits under the current educational benefits program and the recruit pay freeze (grades E1 and E2) for 1983 to 1985. Finally, the new educational benefits were assumed to be fully indexed to price level changes (thus maintaining a constant real value in future years), and not to be transferable to college-age dependents.

changes in personnel policies, such as moving to a larger career force.) The other services would also suffer substantial declines in recruiting performance by 1987.

In summary, increasing educational benefits and limiting recruit pay involve many uncertainties. Data on career plans of those who say they are college-bound suggest that few of them now enter the military. Indeed, a survey in 1976-1977 showed that among high school seniors who said they planned to enroll in two- or four-year colleges, fewer than 10 percent changed their mind and joined the military.⁴ While improved educational benefits could help to raise this proportion, there is no evidence that they would change significantly. Moreover, the benefits offered would have to be substantial—and expensive—to offset the reluctance of young recruits to wait several years before receiving them.

⁴See Congressional Budget Office, *Improving Military Educational Benefits: Effects on Costs, Recruiting, and Retention* (March 1982), Appendix B, page 72.

CHAPTER III. COSTS

A comparison of the costs of military pay raises under the 4-4-4 policy and increases in costs under the four alternatives is shown in Table 5. It includes basic pay, allowances for food and quarters, and other compensation tied to basic pay, except retirement costs which are shown separately in Table 6. The estimates cover enlisted and officer personnel on active duty, and also reserve personnel.¹

PAY RAISES

Under the 4-4-4 policy, the cost of pay raises would amount to \$1.5 billion in fiscal year 1983 and \$25.8 billion over the five years 1983 to 1987. The most expensive alternative, an 8 percent raise in 1983 followed by comparability raises thereafter, would increase these totals by \$1.5 billion in 1983 and \$19.2 billion over five years. A 4 percent raise in 1983 followed by comparability raises would leave cost unchanged in 1983 and add \$10.2 billion in 1983-1987. The targeted raise alternative would be slightly more expensive than a 4 percent raise for personnel--\$100 million in 1983 and \$10.8 billion over five years.

The cost of the educational benefits alternative involves two components--the pay freeze for recruits (combined with a 4 percent raise in 1983 for other personnel) and the accrual charges for educational benefits to be paid in the future.² Relative to the costs of the 4-4-4 policy, these

¹Reserve pay increases under each alternative are identical to those shown in Table 1 for the active force.

²These accrual charges were calculated to cover the basic \$200 per month benefit, the \$400 per month bonus "kickers," and the 25 percent cash-out provision for new recruits only. Under H.R. 1400, the basic \$200 per month benefit would not be funded under an accrual system, and personnel currently serving on active duty would be eligible for the new benefits. Finally, no deduction was included for the elimination of current VEAP benefits for those entering the military after October 1, 1982. These savings would be quite small, however--about \$5 million in 1986 and \$15 million in 1987.

TABLE 5. INCREASES IN COMPENSATION OUTLAYS RESULTING FROM ALTERNATIVES TO THE 4-4-4 POLICY FISCAL YEARS 1983 TO 1987 (In millions of current dollars)

Pay Raise Plan	1983	1984	1985	1986	1987	Total 1983-1987
Cost of 4-4-4 Pay Raises	1,500	3,100	4,800	7,000	9,400	25,800
Additional Costs Under						
8 percent in 1983 and comparability thereafter	1,500	3,000	4,500	4,900	5,300	19,200
4 percent in 1983 and comparability thereafter	0	1,300	2,700	3,000	3,200	10,200
Targeted raise in 1983 and comparability thereafter	100	1,400	2,800	3,100	3,400	10,800
Educational benefits and no recruit pay increase in 1983-1985						
Pay freeze	-100	1,100	2,300	2,500	2,700	
Accrual charge ^a	<u>540</u>	<u>550</u>	<u>590</u>	<u>600</u>	<u>620</u>	
Total	440	1,650	2,890	3,100	3,320	11,400

^aThis option includes the "accrual" costs of liabilities for educational benefits that would be paid in the future. Current educational benefits would be cancelled under this option, resulting in a 1983 reduction of \$140 million in liabilities (also on an accrual basis) for future benefits. These liabilities do not now appear in the DoD budget, however, and so are not included in this table.

TABLE 6. INCREASES IN RETIREMENT COSTS UNDER ALTERNATIVES TO THE 4-4-4 PAY RAISE POLICY, FISCAL YEARS 1983 TO 1987 (In millions of current dollars)

Pay Raise Plan	1983	1984	1985	1986	1987	Total 1983-1987
Changes in Outlays Under Present Accounting Rules^a						
8 Percent Across-the-Board Raise in 1983	10	40	86	147	214	497
4 Percent Across-the-Board Raise in 1983	0	9	33	70	110	222
Targeted Raise in 1983	5	24	60	108	163	360
Annual Changes Under Accrual Accounting^b						
8 Percent Across-the-Board Raise in 1983	500	1,000	1,500	1,700	1,800	6,500
4 Percent Across-the-Board Raise in 1983	0	500	900	1,000	1,100	3,500
Targeted Raise in 1983	250	700	1,200	1,350	1,500	5,000

NOTE: The educational benefits alternative would increase retirement outlays and accrual charges by the same amounts as the 4 percent raise alternative.

^aUnder present accounting rules, the defense budget function shows only the retirement costs of past servicemembers.

^bUnder accrual accounting rules that the Administration intends to propose, the budget would show the amount that would have to be set aside to fund in full retirement liabilities that military personnel earn (or accrue) each year.

two components together would add \$440 million in 1983 and \$11.4 billion over the five-year period.

RETIREMENT PAY

The alternatives would also increase retirement costs, because those presently on active duty who retire between 1983 and 1987 would receive larger annuities. Table 6 shows these increases in outlays and accrual charges over the next five years, relative to the 4-4-4 policy. Retirement outlays would increase by roughly \$10 million in 1983 under the 8 percent pay raise alternative, and by about \$5 million under the targeted raise alternative. Over five years, the total increases would be about \$500 million and \$360 million for these two alternatives, respectively. A 4 percent raise in 1983 followed by comparability raises would leave retirement outlays unchanged in 1983 but would add about \$220 million to the total over five years.

Increases in actual retirement costs would be modest over the next few years regardless of the pay raise chosen. This is because few people would retire and begin drawing retired pay over the period. As Table 6 shows, the cost increases would be larger if the liabilities for future retirement costs of all those now on active duty were taken into account. Such retirement accrual charges are not now shown in the federal budget, but some maintain that they should be included.

The pattern of increases in retirement accrual charges would be similar to that of the increases in pay. An 8 percent raise in 1983, with comparability pay raises thereafter, would add roughly \$500 million to retirement liabilities in 1983 and \$6.5 billion over 1983-1987. The costs would be correspondingly lower for the other alternatives. A 4 percent pay raise in 1983 would result in no change in retirement liabilities for 1983 but would add \$3.5 billion over five years. The targeted raise alternative would raise accrual charges by roughly \$250 million in 1983 and almost \$5 billion in 1983-1987.